Clean Air Act 112(r) Risk Management Program (RMP) SPCC/FRP EPCRA

CHEMICAL EMERGENCY PREVENTION & PLANNING Newsletter

March - April 2010 US EPA Region 10

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CHEMICAL EMERGENCY PREVENTION & PLANNING
Newsletter

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REPORT
CHEMICAL or OIL SPILLS
to the NATIONAL RESPONSE CENTER
1-800-424-8802

Georgia Pacific after the September 10, 1997 plant explosion.

Managing Chemical Reactivity Hazards

Many materials used in industrial facilities can pose chemical reactivity hazards. Conventional management systems frequently do not adequately address the unique behavior of materials that may react to cause excessive temperature or pressure excursions or toxic or corrosive emissions.

The consequences of a reactive chemical incident can be severe. In a 2002 study, the U.S. Chemical Safety Board (CSB) collected detailed information on 167 serious incidents that occurred between 1980 and 2001. EPA reviewed CSB's information and identified the most commonly reported management deficiencies. In order of frequency, the reported management deficiencies are:

- Operating Procedures, Safe Operating Limits and Training *
- Hazard Identification and Evaluation *
- Human Factors
- Management of Change *
- Emergency Relief Equipment and Controls *
- Process Design
- Process Knowledge
- Incident Investigation *
- Process Hazard Analysis *
- Safety Auditing
- Equipment Maintenance *

** Key Risk Management Program Prevention Program elements.*

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Harry Bell Retires

Harry Bell has been an inspector in EPA's Risk Management Program (RMP) since its inception in June, 1999. He received a Ph. D. in analytical chemistry and has had 25 years experience in the drinking water, industrial and sanitary wastewater treatment fields. To realize his personal commitment to protecting the health of communities in EPA's Region 10, Harry has worked with industry on operating safe facilities, conducting inspections, and providing compliance assistance and training.

Harry's significant contributions to EPA is highlighted by his training on the 2009 release of RMP*eSubmit at the annual RMP Training conducted at the HAMMER facility. Harry's professionalism, technical skills and experience will be greatly missed. His friends at EPA wish him the best in the next phase of his life.

RMP*eSubmit Webinars

In March 2009, EPA provided new Web-based software called RMP*eSubmit for facilities to use for online Risk Management Plan (RMP) reporting. RMP*eSubmit allows facilities to submit, correct, and access their RMPs online, 24 hours a day, 7 days a week. EPA asks that all facilities use this new method to submit RMPs because it is easy to use and will improve data quality.

For those not familiar with RMP*eSubmit, EPA will hold a Webinar during which we will explain how to submit an RMP using the new software. There will be time for questions and answers during the Webinar.

Future Webinars for RMP*eSubmit are scheduled in April, June, August, and then quarterly/as needed.

Registration is required for the Webinar. We have limited lines available, so registration will be on a first come / first serve basis. Register online via http://www.epa.gov/emergencies/ Find webinar details under "Highlights".

Once registered, you will receive a confirmation e-mail with instructions on how to sign into the Webinar.

Where Do I Go For More Information?

http://www.epa.gov/emergencies/rmp will be updated as new information becomes available.

EPA maintains numerous listservs to keep the public, state and local officials, and industry up to date, including several that pertain to emergency management. You can sign up for our list serve to receive periodic updates:
https://lists.epa.gov/read/all_forums/subscribe?name=callcenter_oswer

EPA Region 10 RMP Coordinator:
Javier Morales 206-553-1255

EPA Region 10 RMP Website:
http://yosemite.epa.gov/R10/CLEANUP.NSF/sites/rmp

This newsletter provides information on the EPA Risk Management Program, EPCRA, SPCC/FRP and other issues relating to Accidental Release Prevention Requirements. The information should be used as a reference tool, not as a definitive source of compliance information. Compliance regulations are published in 40 CFR Part 68 for CAA section 112(r) Risk Management Program, 40 CFR Part 355/370 for EPCRA, and 40 CFR Part 112.2 for SPCC/FRP.

Managing Chemical Reactivity Hazards

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Process Safety Information

Risk Management Program facilities are required to address this potential hazard several ways. Process safety information should provide at least the following:

- Toxicity information
- Permissible exposure limits
- Physical data
- Reactivity data
- Corrosivity data
- Thermal and chemical stability data; and
- Hazardous effects of inadvertent mixing of different materials that could foreseeably occur

Material Safety Data Sheets meeting the requirements of 29 CFR 1910.1200(g) (OSHA) may be used to comply with this requirement to the extent they contain the information required above [40 CFR 68.65(b)]. Read MSDS forms carefully as the information varies depending on the source with some reactivity information missing.

The NIOSH pocket guide is an excellent source for chemical reactivity and can be accessed online. Other sites include OSHA chemical reactivity site; Office of Emergency Management (OEM), and CAMEO chemical reactive hazard. See sidebar for links to these resources.

EPA Alert

Phenol-formaldehyde Reactions

Phenol-formaldehyde reactions are common industrial processes found throughout EPA Region 10. The reaction of phenol with an aldehyde, such as formaldehyde, in the presence of an acidic or basic catalyst is used to prepare phenolic resins. Phenolic resins are used in adhesives, coatings, and molding compounds. The type of catalyst used, the ratio of reactants, and the reaction conditions determine the molecular structure and physical properties of the resin produced. Typically, phenol-formaldehyde reactions are highly exothermic and sensitive to a variety of physical and chemical conditions. Once a reaction is initiated, heat generated by the reaction increases the reaction rate generating more heat.

Case Study

Columbus, Ohio Sept. 10, 1997

At approximately 10:42 a.m., an explosion occurred in a resins production unit at Georgia-Pacific Resins, Inc. in Columbus, Ohio. The blast was reported to be felt at least 2 miles and possibly as far as 7 miles away according to various news accounts and other reports. As a result of the explosion, one worker was killed and four others injured. The explosion extensively damaged the plant. (Read more)

Resources:

NIOSH Guide

Chemical Reactivity Worksheet (CRW) sponsored by NOAA

OSHA Chemical Data Base

Georgia Pacific after the September 10, 1997 plant explosion.

Ocean Protein LLC Pays nearly $22,000 for Failure to Properly Report Hazardous Chemicals

Ocean Protein, LLC has settled with the Environmental Protection Agency and agreed to pay a $13,166.00 penalty for violating the federal Emergency Planning and Community Right-to-Know Act (EPCRA). The company failed to properly report the storage of Sulfuric Acid at its fish waste processing facility located in Hoquiam, Wash.

Ocean Protein failed to file Emergency and Hazardous Chemical Inventory Forms with local emergency response entities in Washington. Located in Hoquiam, Wash., Ocean Protein produces fish meal, fish oil, and bone meal from fish wastes using sulfuric acid, among other chemicals.

In addition to the penalty, Ocean Protein agreed to provide over $8,800 for training and equipment to the City of Hoquiam Fire Department that will improve the department's capabilities in responding to hazardous materials emergencies in a safe and effective manner.

Facilities that store significant quantities of certain hazardous chemicals are required to submit an inventory of each chemical to the State Emergency Response Commission, the Local Emergency Planning Committee, and the local fire department. Emergency responders rely on this information for their safety and to help protect nearby residents during an emergency, such as a fire or earthquake. Citizens can also access the information to find out what chemicals are being stored and used in their neighborhoods.

St. Maries, Idaho Agrees to spend over $122,000 to settle EPA Risk Management Program Violations

The City of St. Maries, Idaho has agreed to pay $9,220 penalty and spend an estimated $113,550 to settle a case for violations of the U.S. Environmental Protection Agency's policies on emergency prevention requirements. Region 10 settled with the City of St. Maries for violations of the Clean Air Act (CAA) § 112(r) risk management program requirements at its wastewater treatment plant in St. Maries, Idaho. The violations have since been corrected by St. Maries.

The settlement came after EPA found that the city lacked an emergency prevention program to protect the public and the environment from an off-site release of chlorine at its wastewater treatment plant. EPA's Risk Management Program is designed to protect public health and the environment from accidental releases of harmful chemicals.

As part of the settlement, the city will spend an estimated $113,550 to implement the following Supplemental Environmental Projects. St. Maries will purchase and install the following:

- Treated wastewater flow monitoring system;
- Chlorine analyzer and flow proportional chlorinator;
- Chlorine scale monitoring system; and
- Enhanced leak detection and notification system.

These projects will provide added protection to the community and improve the efficiency of the wastewater treatment process, thereby reducing the impact of the wastewater treatment plant on the environment.

For More Information

Superfund, TRI, EPCRA, RMP & Oil Information Center - The Information Center can also answer questions related to Clean Air Act section 112(r) and RMP reporting requirements.

(800) 424-9346 or TDD (800) 553-7672
(703) 412-9810 or TDD (703) 412-3323 in the Washington, D.C. area
Normal Hours of Operation:
Monday - Thursday 10:00 a.m. - 3:00 p.m. Eastern Time
Extended Hours of Operation (May, June, and July):
Monday - Friday 9:00 a.m. - 5:00 p.m. Eastern Time
Closed Federal Holidays

http://www.epa.gov/superfund/contacts/infocenter/

Risk Management Program (RMP) Reporting Center - The Reporting Center can answer questions about software or installation problems. The RMP Reporting Center is available from 8:00 a.m. to 4:30 p.m., Monday through Friday, for questions on the Risk Management Plan program.
(703) 227-7650 (phone)
RMPRC@epa.cdx.net (e-mail)